

CLAIMS

1. A smoke composition comprising 0.05 to 5% of one or more active ingredients, for an effective dose of
5 active ingredient(s) of 0.5 mg/m³ to 40 mg/m³, and a smoke base, characterized in that the smoke base comprises at least one oxidizing agent, one reducing agent and one mineral filler, the mineral filler representing at least 25% by weight of said base, the
10 reducing agent at most 16% by weight of said base, and the ratio by weight of said oxidizing agent to said reducing agent being at least 3/1.

2. The smoke composition as claimed in claim 1,
15 characterized in that said base comprises from 2% to 13% by weight of reducing agent, and from 25% to 65% by weight of mineral filler.

3. The smoke composition as claimed in claim 1 or 2,
20 characterized in that the mineral filler comprises at least one aerating agent, one catalyst and one regulating agent.

4. The smoke composition as claimed in claim 3,
25 characterized in that said base comprises, relative to the final weight of the base, from 2 to 14%, preferably 8 to 12% by weight of said aerating agent, from 0.5 to 10%, preferably 3 to 5% by weight of said catalyst, and from 12 to 60% by weight, preferably from 23 to 42% of
30 said regulating agent.

5. The smoke composition as claimed in claim 3 or 4, characterized in that the compounds of the aerating agent are chosen from silica, kieselguhr, silicates,
35 iron oxide, aluminum oxide, magnesium oxide and calcium oxide, talc, aluminum sulfate, magnesium sulfate, calcium sulfate, potassium sulfate, sodium sulfate and barium sulfate, and mixtures of these compounds.

6. The smoke composition as claimed in claim 5, characterized in that the silica is precipitated or vaporized silica.

5 7. The smoke composition as claimed in any one of claims 3 to 6, characterized in that at least one catalyst compound of the catalyst is chosen from halogenated inorganic salts, including ammonium-based salts, inorganic or organic copper salts, and titanium
10 oxide TiO_2 .

8. The smoke composition as claimed in claim 7, characterized in that at least one catalyst compound of the catalyst is chosen from sodium chloride, sodium
15 iodide, potassium chloride, potassium iodide, calcium chloride, calcium iodide, magnesium chloride, magnesium iodide, ammonium chloride, ammonium iodide, copper chloride, copper iodide, cupric oxide CuO , and titanium oxide TiO_2 .

20 9. The smoke composition as claimed in claim 3 or 4, characterized in that at least one compound of the catalyst is also a compound of the regulating agent.

25 10. The smoke composition as claimed in claim 9, characterized in that said "compound at least" of the catalyst and of the regulating agent is chosen from clay, magnesium chloride hexahydrate, phosphates and polyphosphates, that may or may not be hydrated.

30 11. The smoke composition as claimed in claim 10, characterized in that the "compound at least" of the catalyst and of the regulating agent is clay, in all its forms, including kaolin.

35 12. The smoke composition as claimed in claim 3 or 4, characterized in that at least one compound of the aerating agent is also a compound of the regulating agent.

13. The smoke composition as claimed in claim 12,
characterized in that said "compound at least" of the
aerating agent and of the regulating agent is chosen
5 from inorganic hydroxides, carbonates and bicarbonates.

14. The smoke composition as claimed in claim 13,
characterized in that said "compound at least" of the
aerating agent and of the regulating agent is chosen
10 from magnesium hydroxide, aluminum hydroxide, sodium
carbonate, potassium carbonate, calcium carbonate and
magnesium carbonate, that may or may not crystallize
with water.

15. The smoke composition as claimed in any one of
claims 3 to 14, characterized in that the regulating
agent also comprises compounds chosen from ammonium
carbonates, ammonium bicarbonates and ammonium
carbamates, and inorganic salts that crystallize with
20 water molecules, other than those defined in claim 14.

16. The smoke composition as claimed in any one of
claims 3 to 15, characterized in that the reducing
agent comprises at least one organic compound.
25

17. The smoke composition as claimed in claim 16,
characterized in that said "organic compound at least"
is chosen from carbohydrates and derivatives, polyols,
organic acids and the salts of said acids, said acids
30 or salts containing at most 9 carbon atoms, and carbon
derivatives, such as charcoal, carbon black or
graphite.

18. The smoke composition as claimed in claim 17,
35 characterized in that said "organic compound at least"
is starch, sorbitol, glycerol or pentaerythritol.

19. The smoke composition as claimed in claim 17,
characterized in that said "organic compound at least"

is chosen from organic hydroxycarboxylic acids and their salts, said acids or salts containing up to 7 carbon atoms.

- 5 20. The smoke composition as claimed in claim 19, characterized in that the reducing agent comprises at least one other organic reducing compound that is chosen from urea, dicyandiamide, melamine and cyanamide, and salts thereof, azodicarbonamide, 10 guanidine and its salts, biguanide and its salts, methylcarbazate and ethylcarbazate, said organic reducing compound being present in a maximum proportion of 12% by weight relative to the weight of the base.
- 15 21. The smoke composition as claimed in any one of claims 1 to 20, characterized in that the reducing agent comprises at least one inorganic reducing compound.
- 20 22. The smoke composition as claimed in claim 21, characterized in that the inorganic reducing compound is chosen from sulfur and sulfur oxides, that may or may not be anhydrous.
- 25 23. The smoke composition as claimed in claim 22, characterized in that the inorganic reducing compound is anhydrous or nonanhydrous sodium thiosulfate $\text{Na}_2\text{S}_2\text{O}_3$.
- 30 24. The smoke composition as claimed in claim 23, characterized in that the sodium thiosulfate is present in a proportion ranging from 1 to 6% by weight relative to the weight of the base.
- 35 25. The smoke composition as claimed in any one of claims 1 to 24, characterized in that the oxidizing agent is chosen from nitrates, nitrites, chlorates and perchlorates, iodates and periodates, and peroxides, alone or as a mixture.

26. The smoke composition as claimed in any one of claims 1 to 25, characterized in that the oxidizing agent is present in said base in a proportion ranging from 30 to 70% by weight, and preferably from 40 to 5 60%.

27. The smoke composition as claimed in claim 25 or 26, characterized in that the oxidizing agent contains ammonium nitrate, present in a proportion ranging from 10 40 to 60% by weight relative to the weight of the base.

28. The smoke composition as claimed in any one of claims 25 to 27, characterized in that the oxidizing agent comprises from 30 to 70% by weight of said base, 15 preferably 40 to 60%, at least of two different nitrates.

29. The smoke composition as claimed in claim 28, characterized in that the oxidizing agent comprises 20 from 4 to 16% by weight of said base, of potassium nitrate, sodium nitrate and/or calcium nitrate.

30. The smoke composition as claimed in claim 28 or 29, characterized in that the oxidizing agent also 25 comprises from 1 to 9% by weight of said base, of copper nitrate, aluminum nitrate or magnesium nitrate.

31. The smoke composition as claimed in any one of claims 25 to 30, characterized in that the oxidizing 30 agent comprises at least one peroxide chosen from inorganic peroxyhydrated salts.

32. The smoke composition as claimed in any one of claims 1 to 31, characterized in that said base 35 comprises from 3 to 15% by weight of starch.

33. The smoke composition as claimed in any one of claims 1 to 32, characterized in that it comprises from 6 to 12% by weight of silica.

34. The smoke composition as claimed in any one of claims 1 to 33, characterized in that said base comprises from 2 to 7% by weight of a chlorate or of a perchlorate or of an iodate or of a periodate.

35. The smoke composition as claimed in any one of claims 1 to 34, characterized in that said base comprises from 2 to 7% by weight of a nitrite.

36. The smoke composition as claimed in any one of claims 1 to 35, characterized in that said base comprises from 35 to 45% by weight of ammonium nitrate, from 5 to 12% by weight of sodium nitrate or potassium nitrate, from 6 to 12% by weight of starch, from 4 to 9% by weight of a hydroxycarboxylic acid or of its salt containing at most 6 carbon atoms, from 7 to 10% by weight of silica, and the rest in clay.

37. The smoke composition as claimed in any one of claims 18, 19, 20, 23, 32, 33 and 36, characterized in that said base also comprises one or more halogenated salts, in a proportion ranging from 1 to 7% by weight of the base.

38. The smoke composition as claimed in any one of claims 1 to 37, characterized in that the active ingredient(s) is (are) chosen from bactericidal, fungicidal or insecticidal ingredients.

39. The smoke composition as claimed in any one of claims 1 to 38, characterized in that at least one of the active ingredients is absorbed, in the liquid or pasty state, onto at least one regulating compound.